EXHIBIT 11

Case No. 6:20-cv-00881-ADA

Exhibit A to Google's Disclosure of Extrinsic Evidence for Claim Construction

Term	Patent (claims)	Extrinsic Evidence[1]
"zone scene"	'206 Pat. (all asserted claims) '966 Pat. (Claims 1-3, 7, 9-12, 15, 17-19) '885 Pat. (Claims 1-2, 5, 8-9, 12, 15-16, 19)	Google may rely upon the expert opinion of Dr. Chris Kyriakakis provided in the form of declarations filed with the Court and live testimony at the claim construction hearing, should the Court so desire. Dr. Kyriakakis may provide expert testimony regarding the technology that underlies the alleged inventions, the level of ordinary skill in the art, how the patents, claims, and intrinsic evidence would be understood by one of ordinary skill in the art, the alleged inventions claimed in the asserted patents, the state of the art at the time of the alleged invention, the indefiniteness of certain claim terms and phrases, and the meaning of certain claim terms and phrases to one of ordinary skill in the art, or any other opinions or testimony useful to the Court in conducting the requisite claim construction. Dr. Kyriakakis may additionally rebut any extrinsic evidence offered by Sonos, including any expert opinions. The aforementioned opinions are hereafter referred to as the "Kyriakakis opinions" for simplicity in this chart. **Hargrave's Communications Dictionary (2001)** zone (1) In an internetwork, a subset of nodes which, together, form a logical subdivision. A node can be part of one or more *zones*. A *zone* can encompass multiple networks and can cross network boundaries. (That is, it can apply to parts of several networks.) A *zone* may have a name associated with it that is used to simplify routing and service advertising. (2) In AppleTalk. A logical subset of nodes which together form a subdivision. It can have an associated name, and a node can be part of one or more zones. The zone name is used to simplify routing and service advertising. A zone can encompass multiple networks and can cross network boundaries (that is, apply to parts of several networks).
"zone scene identifying a group configuration"	'206 Pat. (Claims 1, 12)	Kyriakakis opinions *See above* for zone scene

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[1]Google reserves the right to rely on any of the extrinsic evidence listed for one term for any other terms.

Term	Patent (claims)	Extrinsic Evidence[1]
"zone scene identifying a group configuration associated with two or more of the plurality of independent playback devices"	'206 Pat. (Claims 1, 12)	Kyriakakis opinions

See above for "zone scene" |
| "[first / second] zone scene comprising a [first / second] predefined grouping of zone players including at least the first zone player and a [second / third] zone player that are to be configured for synchronous playback of media when the [first / second] zone scene is invoked" | '966 Pat. (Claims 1, 9, 17)

'885 Pat (Claims 1, 8, 15) | |
| "zone | '206 Pat (Claims 1-2, 5, 7, 10, 12, | Kyriakakis opinions |

Term	Patent (claims)	Extrinsic Evidence[1]
configuration"	13, 15-18)	*See above* for "zone scene"
"zone configuration characterizes one or more zone scenes"	'206 Pat (Claims 1, 12, 17)	Kyriakakis opinions *See above* for "zone scene"
"group configuration"	'206 Pat (Claims 1, 3-4, 12, 14, 17, 19)	Kyriakakis opinions
"causing the selectable indication of the at least one of the one or more zone scenes to be displayed"	'206 Pat (Claims 3, 14, 19)	Kyriakakis opinions *See above* for "zone scene"
"invoke"/ "invoked" / "invoking"/ "invocation"	'206 Pat. (Claims 1, 10, 12, 17) '966 Pat. (Claims 1-2, 9-10, 17-18) '885 Pat. (Claims 1, 8, 15)	**The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001)** **invoke** To activate a program, routine, function or process. **IBM Dictionary of Computing**

Term	Patent (claims)	Extrinsic Evidence[1]
		invocation (1) The activation of a program or procedure. (2) An execution of a program. invocation stack A list of programs linked together as a result of programs calling other programs within the same job. Synonymous with program stack. invoke (1) To start a command, procedure, or program. (2) In FORTRAN, to call a subroutine by means of a CALL statement or by a defined assignment. (3) In FORTRAN, to call a function by a reference to it during the evaluation of an expression.
"multimedia"	'206 patent (Claims 1-5, 7, 10-11) '615 patent (Claims 1-3, 8-9, 13-15, 18-21, 25-26)	**IEEE 100 *The Authoritative Dictionary of IEEE Standards Terms*, 7th Edition (2000)** multimedia A form of hypermedia consisting of a combination of two or more forms of the following: text, audio, graphics, animation, and full-motion video. (C) 610.10-1994w **Hargrave's Communications Dictionary (2001)** multimedia (1) A generic description of the generation, presentation, or simultaneous transfer of information in more than one way. Media types include text, graphic (drawings), still images (photographs), motion video, and sound. Multimedia therefore involves two or more simultaneous media types to communicate information. Note that multimedia presentations tend to consume huge amounts of resources, computer processing capability, disk memory, and transmission bandwidth. See also *MPC.* (2) In local area networks (LAN) applications, the use of mixed types of transmission media such as coax, UTP, and fiber optics. **Microsoft's Computer Dictionary 5th Edition (2002)** multimedia *n.* The combination of sound, graphics, animation, and video. In the world of computers, multimedia is a subset of hypermedia, which combines the aforementioned elements with hypertext. *See also* hypermedia, hypertext. **The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001)**

Term	Patent (claims)	Extrinsic Evidence[1]
		multimedia Disseminating information in more than one form. Includes the use of text, audio, graphics, animated graphics and full-motion video. See *MPC*.
"multimedia controller"	'206 patent, (Claims 1-5, 7, 10-11)	*See above* for "multimedia"
"multimedia content"	'615 Pat. (Claims 1-3, 8-9, 13-15, 18-21, 25-26)	*See above* for "multimedia"
"playback device"	'615 Pat. (Claims 1-3, 6-9, 11-15, 18-21, 23-26) '033 Pat. (Claims 1-2, 4, 7-8, 11-13, 15-16)	**IEEE 100 *The Authoritative Dictionary of IEEE Standards Terms*, 7th Edition (2000)** **playback** (1) A term used to denote reproduction of a recording. (EEC/PE) [119] (2) *See also:* reversible execution. (C) 610.12-1990 (3) To output data or text for review purposes. *Synonyms:* playout; printout. (C) 610.10-1994w **Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005)** **playback** (n.) The realization of recorded images or sound on any kind of audio or video equipment.
"zone player"	'966 Pat. (Claims 1-2, 4, 6, 9-10, 12, 14, 17-18, 20) '885 Pat. (all asserted claims)	**Hargrave's Communications Dictionary (2001)** **zone** (1) In an internetwork, a subset of nodes which, together, form a logical subdivision. A node can be part of one or more *zones*. A *zone* can encompass multiple networks and can cross network boundaries. (That is, it can apply to parts of several networks.) A *zone* may have a name associated with it that is used to simplify routing and service advertising. (2) In AppleTalk. A logical subset of nodes which together form a subdivision. It can have an associated name, and a node can be part of one or more zones. The zone name is used to simplify routing and service advertising. A zone can encompass multiple networks and can cross network boundaries (that is, apply to parts of several networks).

Term	Patent (claims)	Extrinsic Evidence[1]
"data network"	'885 Pat. (Claims 1, 3. 6, 8, 10, 15, 17, 20) '033 Pat. (Claims 1, 12, 15)	**McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth Edition (2003)** **analog data** [COMPUT SCI] Data represented in a continuous form, as contrasted with digital data having discrete values. { 'an·əl,äg 'dad·ə } **data** [COMPUT SCI] **1.** General term for numbers, letters, symbols, and analog quantities that serve as input for computer processing. **2.** Any representations of characters or analog quantities to which meaning, if not information, may be assigned. [SCI TECH] Numerical or qualitative values derived from scientific experiments. { 'dad·ə, 'dād·ə, or 'däd·ə } **digital data** [COMPUT SCI] Data that are electromagnetically stored in the form of discrete digits. { 'dij·əd·əl 'dad·ə } **packet** [BIOL] A cluster of organisms in the form of a cube resulting from cell division in three planes. [COMMUN] A short section of data of fixed length that is transmitted as a unit. [PHYS] *See* wave packet. { 'pak·ət } **Dictionary of Computer and Internet Terms, Ninth Edition (2006)** **data** information. The word was originally the plural of *datum*, which means "a single fact," but it is now often used as a collective singular. Data processing is the act of using data for making calculations or decisions. *Usage note:* This usage came and went. **Hargrave's Communications Dictionary (2001)** **data** A representation of a collection of facts, concepts, instructions, or information to which meaning has been assigned. The representation may be analog, digital, or any symbolic form suitable for storage, communication, interpretation, or processing by human or automatic means. "Data" is the plural of the Latin *datum*, meaning one item of information. To be correct, a single item should be called a datum and more than one should be called *data*, i.e., "one datum is . . ." and "two *data are* . . ."

Term	Patent (claims)	Extrinsic Evidence[1]
		network (1) A collection of generally passive, electronic components (e.g., resistors, capacitors, and inductors) interconnected in some way that performs a specific function; usually limited in scope (e.g., simulation of a transmission line or pulse shaping). (2) A collection of two or more autonomous information sources and sinks interconnected by one or more communication links. The components of a network include: • Nodes (computers, printers, network interface cards[—NICs], etc.). • Connection elements (cabling, wiring centers, optical fibers, switching systems, etc.). The interconnecting link(s) may either be temporary (as with the dial-up telephone network) or permanent, such as with cables. The data passing through the interconnecting link is examined for errors, in contrast with a *multiprocessor system* wherein the data is accepted "at face value." • Topology (physical and logical): • Physical topology describes how nodes are wired or interconnected. (Various topologies include the bus, ring, and star networks.) • Logical topology describes how network packets are treated. For example, a logical ring may be created on a physical star network by addressing a token packet sequentially to each node. • Auxiliary components (peripheral devices, safety devices, and tools). • Network operating system (NOS) and workstation software. Networks are often classified according to their geographic extent or according to the transmission protocol used. Some examples of voice and/or data networks include the public switched telephone network (PSTN), integrated services digital network (ISDN), Ethernet (local area network), and the Internet (a world wide computer network). See also *network classifications*. **Comprehensive Dictionary of Electrical Engineering, Second Edition (2005)** **analog data** data represented in a continuous form with respect to continuous time, as contrasted with digital data represented in a discrete (discontinuous) form in a sequence of time instant.

Term	Patent (claims)	Extrinsic Evidence[1]
		analog signal a signal represented in a continuous form with respect to continuous time, as contrasted with digital signal represented in a discrete (discontinuous) form in a sequence of time instant. *See also* analog data. **local area network** a network of computers and connection devices (such as switches and routers) that are located on a single site. The connections are direct cables (such as UTP or optical fiber) rather than telecommunication lines. The computer network in a university campus is typically a local area network. **Newton's Telecom Dictionary, Nineteenth Edition (2003)** **Analog Signal** A signal in the form of a continuous wave varying in step with the actual transmitted information; attempts to transmit an exact replica of the inputted signal down a communications channel. See Analog and all the various definitions starting with Analog. **Data** This is AT&T Bell Labs' definition: "A representation of facts, concepts or instructions in a formalized manner, suitable for communication, interpretation or processing." Typically anything other than voice. **Digital Signal** A discontinuous signal. One whose state consists of discrete elements, representing very specific information. When viewed on an oscilloscope, a digital signal is "squared." This compares with an analog signal which typically looks more like a sine wave, i.e. curvy. Usually amplitude is represented at discrete time intervals with a digital value. **Modern Dictionary of Electronics, Seventh Edition (1999)**

Term	Patent (claims)	Extrinsic Evidence[1]
		analog data — 1. A physical representation of information such that the representation bears an exact relationship to the original information. The electrical signals on a telephone channel are an analog data representation of the original voice. 2. Data represented in a continuous form, as contrasted with digital data represented in a discrete (discontinuous) form. Analog data is usually represented by physical variables, such as voltage, resistance, rotation, etc. **data** — 1. A general term used to denote any or all numbers, letters, symbols, or facts that refer to or describe an object, idea, condition, situation, or other factors. It connotes basic elements of information that can be processed or produced by a computer. Sometimes *data* is considered to be expressible only in numerical form, but *information* is not so limited. 2. A general term for any type of information. 3. Inputs in the form of a character string that may have significance beyond their numerical meaning. 4. Any representations, such as characters or analog quantities, to which meaning might be assigned. **digital data** — 1. Data represented in discrete, discontinuous form, as contrasted with analog data represented in continuous form. Digital data is usually represented by means of coded characters (e.g., numbers, signs, symbols, etc.). 2. Any data that is expressed in digits. The term usually implies the use of binary digits. **Webster's New World Telecom Dictionary (2008)**

Term	Patent (claims)	Extrinsic Evidence[1]
		packet 1. In the generic sense, referring to the manner in which data are organized into discrete units for transmission and switching through a data network. The data unit can be known as a block, frame, cell, or packet, depending on the protocol specifics. The packet comprises a header, payload, and sometimes a trailer, again depending on protocol specifics. The packet can be a user packet containing user data, or a signaling and control packet for various network monitoring, alerting and alarming, maintenance, and other administrative purposes. The payload can be a complete message, a fragment or segment of a message, or an aggregation of bits or bytes that form a short portion of a long data stream associated with a voice or video call. See also *bit, block, byte, cell, data stream, fragment, frame, header, message, payload, protocol, segment,* and *trailer.* 2. In a technology-specific sense, a packet is a data unit in an internetwork, such as the Internet or other packet-switched network in which routers interconnect networks and subnetworks to exchange traffic between nodes. In terms of the OSI Reference Model, a packet is defined in Layer 3, the Network Layer. Blocks, cells, and frames are defined in Layer 2, the Data Link Layer, and have local significance, only. See also *block, cell, datagram, Data Link Layer, frame, Internet, Network Layer, OSI Reference Model, packet switch,* and *router.* **Webster's New World Computer Dictionary, 10th Edition (2003)** **packet** In networking, a unit of data of a fixed size—not exceeding the network's maximum transmission unit (MTU) size—that has been prepared for transmission over a packet-switching network. Each packet contains a header that indicates its origin and its destination. Synonymous with data-gram. See *packet-switching network.* **Packet Broadband Network Handbook, McGraw-Hill (2004), (excerpts)**

Term	Patent (claims)	Extrinsic Evidence[1]
		8.1 Introduction A local area network is a high-speed data network that covers a relatively small geographic area. It typically connects workstations, personal computers, printers, servers, and other end-user devices, which are collectively also known as *data terminal equipment*. The common applications of LAN include shared access to devices and applications, file exchange between connected users, and communication between users via electronic mail and others. LANs are also private data networks, because they belong to an organization and are used to carry data traffic as opposed to voice traffic. This section provides a brief introduction to LAN history, standards, protocol stacks, topologies, and devices. **8.1.1 LAN History and Standards** LAN is a type of broadband packet access network that carries the packet data traffic of an organization. LAN interconnects the end users of an organization to an outside public data network such as the Internet. The basis of LAN technologies and standards was defined in the late 1970s and early 1980s. LAN technologies really emerged with the Internet itself, and the first widely deployed LAN technology, Ethernet, is almost as old as the Internet itself. The overwhelming majority of the deployed LANs are Ethernet. IEEE 802, a branch of the International Institute of Electrical and Electronics Engineers (IEEE), is responsible for most of the LAN standards. These standards have also been adopted by other standards organization such as ANSI and ISO. The major LAN standards are listed in Table 8-1. Okhravi et al., *Data Diodes in Support of Trustworthy Cyber Infrastructure* Vorontsove et al., *Development of unidirectional data diode system in the secure environment*, Workshop on computer science and information technologies 19th CSIT 2017, Germany, Baden- Baden, 2017 U.S. Patent No. 6,081,907 to Witty et al. (Data Delivery System and Method for Delivering Data And Redundant Information Over a Unidirectional Network) Kyriakakis opinions

Term	Patent (claims)	Extrinsic Evidence[1]
		See also "local area network" below.
"local area network"	'615 Pat. (Claims 1, 13, 25)	**Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005)** local area network (LAN) (n.) Any physical network technology that operates at high speeds over short distances, such as several thousand yards. Technologies that play roles in a LAN include Ethernet, token ring, Asynchronous Transfer Mode (ATM), Fiber Distributed Data Interface (FDDI) II, 10BASE-T, and Systems Network Architecture (SNA). The system of cables and interfaces controlled by a communications protocol that connects microcomputers for sharing resources and peripherals is all part of the LAN. Connection is also possible with an infrared or wireless link. Compare *wide area network*. **Webster's New World Computer Dictionary, 10th Edition (2003)**

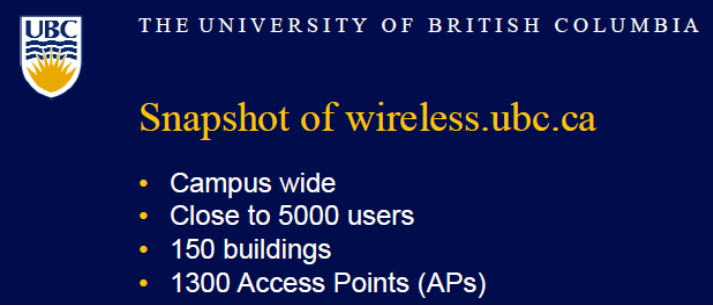| Term	Patent (claims)	Extrinsic Evidence[1]
		LAN Acronym for local area network. A computer network that uses cables or radio signals to link two or more computers within a geographically limited area (generally one building or a group of buildings). The linked computers are called workstations. LANs are differentiated by their architecture (peer-to-peer or client/server), topology (bus, hierarchical, multipoint, point-to-point, ring, or star), protocols (standards for transferring data among the linked workstations), and media (for instance, coaxial, twisted-pair, and fiber optic). Peer-to-peer LANs are simple to implement using the built-in networking capabilities of computers running Microsoft Windows or Mac OS; such networks enable the linked computers to share expensive peripherals such as laser printers; client/server networks use a LAN server to make centralized resources (such as databases and applications) available to workstation users. Network protocols operate at differing layers; for example, Ethernet is a lower-layer protocol that defines the basic mechanisms by which data enters the network and travels to its destination; Ethernets can work with a variety of higher-level protocols, including AppleTalk, Common Internet File System (CIFS), and TCP/IP. See *AppleTalk, baseband, broadband, bus network, client/server, Ethernet, peer-to-peer network, ring network, star network, wireless LAN.*

Term	Patent (claims)	Extrinsic Evidence[1]
		Webster's New World Dictionary of Computer Terms, Eighth Edition (2000) **LAN** Acronym for local area network. A computer network that physically links two or more computers within a geographically limited area (generally one building or a group of buildings). The linked computers are called workstations. Peer-to-peer LANs enable the linked computers to share expensive peripherals such as laser printers; client/server networks use a LAN server to make resources (such as databases and applications) available to workstation users. Local area networks have a characteristic topology (such as bus, ring, or star) and implement one or more networking protocols (such as AppleTalk, Ethernet, or TCP/IP). See *AppleTalk, baseband, broadband, bus network, client/server, Ethernet, multiuser system, NetWare, network operating system (NOS), peer-to-peer network, ring network,* and *star network.* **Comprehensive Dictionary of Electrical Engineering, Second Edition (2005)** **local area network** a network of computers and connection devices (such as switches and routers) that are located on a single site. The connections are direct cables (such as UTP or optical fiber) rather than telecommunication lines. The computer network in a university campus is typically a local area network. **Newton's Telecom Dictionary, Nineteenth Edition (2003)**

Term	Patent (claims)	Extrinsic Evidence[1]
		Local Area Network LAN. A short distance data communications network (typically within a building or campus) used to link computers and peripheral devices (such as printers, CD-ROMs, modems) under some form of standard control. Older data communications networks used dumb terminals (devices with no computing power) to talk to distant computers. But the economics of computing changed with the invention of the personal computer which had "intelligence" and which was cheap. LANs were invented as an afterthought — after PCs — and were originally designed to let cheap PCs share peripherals — like laser printers — which were too expensive to dedicate to individual PCs. And as time went on, what LANs were used for got broader and broader. Today, LANs have four main advantages: 1. Anyone on the LAN can use any of the peripheral devices connected to the LAN. 2. Anyone on the LAN can access databases and programs running on client servers (super powerful PCs) attached to the LAN; and 3. Anyone on the LAN can send messages to and work jointly with others on the LAN. 4. While a LAN does not use common carrier circuits, it may have gateways and/or bridges to public telecommunications networks. See LAN Manager, Token Ring and Ethernet. **The Dictionary of Multimedia, Fourth Edition (2005)** local area network (LAN) (n.) Any physical network technology that operates at high speeds over short distances, such as several thousand yards. Technologies that play roles in a LAN include Ethernet, token ring, Asynchronous Transfer Mode (ATM), Fiber Distributed Data Interface (FDDI) II, 10BASE-T, and Systems Network Architecture (SNA). The system of cables and interfaces controlled by a communications protocol that connects microcomputers for sharing resources and peripherals is all part of the LAN. Connection is also possible with an infrared or wireless link. Compare *wide area network*. **Computer & Internet Dictionary, Third Edition (1999)**

Term	Patent (claims)	Extrinsic Evidence[1]
		local-area network A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves. A system of LANs connected in this way is called a *wide-area network (WAN)*. Most LANs connect workstations and personal computers. Each *node*

Term	Patent (claims)	Extrinsic Evidence[1]
		(individual computer) in a LAN has its own CPU with which it executes programs, but it is also able to access data and devices anywhere on the LAN. This means that many users can share expensive devices, such as laser printers, as well as data. Users can also use the LAN to communicate with one another, by sending e-mail or engaging in chat sessions. There are many different types of LANs, *Ethernets* being the most common for PCs. Most Apple Macintosh networks are based on Apple's AppleTalk network system, which is built into Macintosh computers. The following characteristics differentiate one LAN from another: **topology:** The geometric arrangement of devices on the network. For example, devices can be arranged in a ring or in a straight line. **protocols:** The rules and encoding specifications for sending data. The protocols also determine whether the network uses a peer-to-peer or client/server architecture. **media:** Devices can be connected by twisted-pair wire, coaxial cables, or fiber optic cables. Some networks do without connecting media altogether, communicating instead via radio waves. LANs are capable of transmitting data at very fast rates, much faster than data can be transmitted over a telephone line; but the distances are limited, and there is also a limit on the number of computers that can be attached to a single LAN. ⇒ See also APPLETALK; ARCNET; BRIDGE; CLIENT/SERVER ARCHITECTURE; DCC; E-MAIL; ETHERNET; IEEE 802 STANDARDS; INTERNETWORKING; MAN; NETWARE; NETWORK; NETWORK INTERFACE CARD; NETWORK OPERATING SYSTEM; NODE; NOVELL; PEER-TO-PEER ARCHITECTURE; PERSONAL COMPUTER; PROTOCOL; SNMP; SWITCHING HUB; TOKEN BUS NETWORK; TOKEN-RING NETWORK; TOPOLOGY; TOPS; VLAN; WIDE-AREA NETWORK. **IEEE Standard for Local and Metropolitan Area Networks, Std. 802-2001 (2002)**

Term	Patent (claims)	Extrinsic Evidence[1]
		1.2 Key concepts
		The LANs described herein are distinguished from other types of data networks in that they are optimized for a moderate-sized geographic area, such as a single office building, a warehouse, or a campus. An IEEE 802® LAN is a peer-to-peer communication network that enables stations to communicate directly on a point-to-point, or point-to-multipoint, basis without requiring them to communicate with any intermediate switching nodes. LAN communication takes place at moderate-to-high data rates, and with short transit delays, on the order of a few milliseconds or less.
		Microsoft Computer Dictionary, Fifth Edition (2002)
		LAN *n.* Acronym for local area network. A group of computers and other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other on the network. LANs commonly include PCs and shared resources such as laser printers and large hard disks. The devices on a LAN are known as nodes, and the nodes are connected by cables through which messages are transmitted. *See also* baseband network, broadband network, bus network, client/server architecture, collision detection, communications protocol, contention, CSMA/CD, network, peer-to-peer architecture, ring network, star network. *Compare* WAN.
		Deploying the World's Largest Campus 802.11b Network, **University of British Columbia** (November 11, 2003; available at http://www.ieee802.org/802_tutorials/03-6November/www.wireless.ubc.ca-IEEE-Nov2003.ppt)

Term	Patent (claims)	Extrinsic Evidence[1]
		THE UNIVERSITY OF BRITISH COLUMBIA Snapshot of wireless.ubc.ca • Campus wide • Close to 5000 users • 150 buildings • 1300 Access Points (APs) *See also* "data network"
"network interface"	'206 Pat. (Claims 1, 17) '615 Pat. (Claims 1, 13)	**The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001)** network (1) An arrangement of objects that are interconnected. See *LAN*. (2) In communications, the transmission channels interconnecting all client and server stations as well as all supporting hardware and software. **Dictionary of Computing, 6th edition (2010)** **network** /'netwɜːk/ *noun* a system made of a number of points or circuits that are interconnected ■ *verb* to link points together in a network ○ *They run a system of networked micros.* 'Asante Technologies has expanded its range of Ethernet-to-LocalTalk converters with the release of AsantePrint 8, which connects up to eight LocalTalk printers, or other LocalTalk devices, to a high-speed Ethernet network.' [*Computing*] **Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005)**

Term	Patent (claims)	Extrinsic Evidence[1]
		network (n.) A group of computers, peripherals, or other equipment connected to one another for the purpose of passing information and sharing resources. Networks can be local or remote. The topology of a network is the geographic arrangement of links and nodes, which may be arranged in the shape of a star, a tree, or a ring. **Dictionary of Computer and Internet Words (2001)** interface 1. The devices, graphics, commands, and prompts that enable a computer to communicate with any other entity, such as a printer or the user. For example, the ports and connector are the interface between a computer and a printer. The interface that lets a user communicate with the computer is called a user interface. *See also* user interface. 2. *See* port. Interl... **Dictionary of Computer and Internet Terms, 8th Ed. (2003)** **interface** the connection between two systems through which information is exchanged. For example, in computer hardware, an interface is an electrical connection of the proper type. In software, it is a standard format for exchanging data. The USER INTERFACE of a piece of software is the way it interacts with the human being who is using it. *See also* DATA COMMUNICATION; USER INTERFACE. **Computer and Internet Dictionary, 3rd Ed. (1999)** **interface** *n* **1.** Something that connects two separate entities. For example, a *user interface* is the part of a program that connects the computer with a human operator (user). There are also interfaces to connect programs, to connect devices, and to connect programs to devices. An interface can be a program or a device, such as an electrical connector. —*v* **2.** To communicate. For example, two devices that can transmit data between each other are said to *interface with each other*. This use of the term is scorned by language purists because *interface* has historically been used as a noun.

Term	Patent (claims)	Extrinsic Evidence[1]
		Dictionary of Computer Science, Engineering, and Technology by Laplante (2001) **interface** (1) the boundary between a system and its environment, across which interaction occurs by the passing of information. (2) the externally visible features or characteristics (of an object, use case, subroutine, etc.). This term is used in the languages supporting the distinction between interfaces and classes such as C++. The New Penguin Dictionary of Computing by Pountain (2001) **interface** A common boundary where two different domains join: hence that term has several specialized meanings in computing. **1** An electrical connection between two devices, as in SERIAL interface or SCSI interface. **2** Short for USER INTERFACE, that part of a computer program that manages interactions with the user. **3** In OBJECT-ORIENTED PROGRAMMING, a set of METHODS that a class of objects makes visible for communicating with other objects. An interface contains only the names and PARAMETER lists of the methods, not their implementations, so objects of different classes may display the same interface while providing a different implementation. For example many classes may have a method named Print, but the precise details of how to print objects of each class will be different. Separating interface from implementation in this way enables programmers to write economical POLYMORPHIC code that can handle many different classes of object. **Data Telecommunications Dictionary by Peterson (1999)**

Term	Patent (claims)	Extrinsic Evidence[1]
		interface A hardware connection, or logical connection or translation point. Interfaces are an intrinsic part of interconnected computers, peripherals, and networks. Almost every aspect of data and electrical connections in the telecommunications industry uses a different format or version of a format, and the interface is the point at which all these different hardware and software junctions come together. A cable, peripheral card, card slot, or chip socket are all types of interfaces, as are the images on the monitor and the sounds from a speaker. **Understanding Networking Technology, 2nd Ed. (1999)** Interface The boundary between two things, typically two programs, two pieces of hardware, a computer and its user, and a project manager and the customer.
"wireless communication interface"	'615 Pat. (Claim 25)	**Dictionary of Computer and Internet Words (2001)** interface 1. The devices, graphics, commands, and prompts that enable a computer to communicate with any other entity, such as a printer or the user. For example, the ports and connector are the interface between a computer and a printer. The interface that lets a user communicate with the computer is called a user interface. See also user interface. 2. See port. **Dictionary of Computer and Internet Terms, 8th Ed. (2003)** interface the connection between two systems through which information is exchanged. For example, in computer hardware, an interface is an electrical connection of the proper type. In software, it is a standard format for exchanging data. The USER INTERFACE of a piece of software is the way it interacts with the human being who is using it. See also DATA COMMUNICATION; USER INTERFACE. **Computer and Internet Dictionary, 3rd Ed. (1999)**

Term	Patent (claims)	Extrinsic Evidence[1]
		interface *n* **1.** Something that connects two separate entities. For example, a *user interface* is the part of a program that connects the computer with a human operator (user). There are also interfaces to connect programs, to connect devices, and to connect programs to devices. An interface can be a program or a device, such as an electrical connector. —*v* **2.** To communicate. For example, two devices that can transmit data between each other are said to *interface with each other*. This use of the term is scorned by language purists because *interface* has historically been used as a noun. **Dictionary of Computer Science, Engineering, and Technology by Laplante (2001)** **interface** (1) the boundary between a system and its environment, across which interaction occurs by the passing of information. (2) the externally visible features or characteristics (of an object, use case, subroutine, etc.). This term is used in the languages supporting the distinction between interfaces and classes such as C++. **The New Penguin Dictionary of Computing by Pountain (2001)**

Term	Patent (claims)	Extrinsic Evidence[1]
		interface A common boundary where two different domains join: hence that term has several specialized meanings in computing. **1** An electrical connection between two devices, as in SERIAL interface or SCSI interface. **2** Short for USER INTERFACE, that part of a computer program that manages interactions with the user. **3** In OBJECT-ORIENTED PROGRAMMING, a set of METHODS that a class of objects makes visible for communicating with other objects. An interface contains only the names and PARAMETER lists of the methods, not their implementations, so objects of different classes may display the same interface while providing a different implementation. For example many classes may have a method named Print, but the precise details of how to print objects of each class will be different. Separating interface from implementation in this way enables programmers to write economical POLYMORPHIC code that can handle many different classes of object. **Data Telecommunications Dictionary by Peterson (1999)** **interface** A hardware connection, or logical connection or translation point. Interfaces are an intrinsic part of interconnected computers, peripherals, and networks. Almost every aspect of data and electrical connections in the telecommunications industry uses a different format or version of a format, and the interface is the point at which all these different hardware and software junctions come together. A cable, peripheral card, card slot, or chip socket are all types of interfaces, as are the images on the monitor and the sounds from a speaker. **Understanding Networking Technology, 2nd Ed. (1999)** **Interface** The boundary between two things, typically two programs, two pieces of hardware, a computer and its user, and a project manager and the customer.

Term	Patent (claims)	Extrinsic Evidence[1]
		See "network interface" above.
"standalone mode"	'966 Pat. (Claims 1, 9, 17) '885 Pat.(Claims 1-2, 5, 8-9, 12, 15-16, 19)	
"data defining the second zone scene"	'966 Pat. (Claims 7, 15)	Kyriakakis opinions
"wherein the instruction ... comprises an instruction..."	'885 Pat. (Claims 2, 5, 9, 12, 16, 19)	Kyriakakis opinions **Microsoft's Computer Dictionary 5th Edition (2002)** **Instruction** *n.* An action statement in any computer language, most often in machine or assembly language. Most programs consist of two types of statements: declarations and instructions. *See also* declaration, statement. **The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001)** **Instruction** (1) A statement in a programming language. (2) A machine instruction. **Dictionary of Computing, 6th edition (2010)**

Term	Patent (claims)	Extrinsic Evidence[1]
		instruction /ɪnˈstrʌkʃən/ *noun* a word used in a programming language that is understood by the computer as a command to carry out a particular action 'A Taos kernel, typically 15Kb in size, resides at each processing node to 'translate', non-native instructions – on the fly when needed. This kernel contains the only code which has to be written in the processor's native instruction set.' [*Computing*]
"first cloud servers" and "second cloud servers of a streaming content service"	'615 Pat. (Claims 1, 8-9, 13, 20-21, 25)	
"a cloud-based computing system associated with a cloud-based media service"	'033 Pat. (Claims 1, 12, 15)	Kyriakakis opinions
"one or more transport controls to control playback" / "transport controls"	'615 Pat (Claims 1-3, 6-7, 13-15, 18-19, 25-26) '033 Pat (Claims 8-9)	
"remote playback queue"	'033 Pat. (Claims 1, 4, 7, 11-12, 15-16)	**Microsoft Computer Dictionary, 5th Edition (2002)**

Term	Patent (claims)	Extrinsic Evidence[1]
		queue[1] *n.* A multi-element data structure from which (by strict definition) elements can be removed only in the same order in which they were inserted; that is, it follows a first in, first out (FIFO) constraint. There are also several types of queues in which removal is based on factors other than order of insertion—for example, some priority value assigned to each element. *See also* deque, element (definition 1). *Compare* stack. **Webster's New World Telecom Dictionary (2008)** **queue** A list, string, or stack of things constructed so that items are added to one end and relieved from one end or the other. Generally speaking, items are added to one end, known as the tail, and relieved from the other end, known as the head. In the absence of some priority mechanism for purposes of establishing and maintaining quality-of-service (QoS) differentiation, items are relieved from the head of the queue in the order they entered the tail. This approach is known as *first-in-first-out* (FIFO). Incoming call centers employ automatic call distributors (ACDs) that queue incoming calls, serving them to agents as they become available. Fax servers can queue documents for transmission during non-prime time hours, when international calling costs are lowest. PBX systems commonly have the capability to queue outgoing calls for expensive long distance circuits. Switches and routers queue packets in buffers until internal resources queue 404 are available to process them or until bandwidth is available to forward them. Systems may support multiple queues for different types of calls or packets. Priority mechanisms can cause a call or packet to move up in the queue or even advance to the head of the queue in order that it can be served more quickly. See **The New Penguin Dictionary of Computing by Pountain (2001)**

Term	Patent (claims)	Extrinsic Evidence[1]
		queue A data structure with the property that the first element that can be removed is the first one that was put in. Hence a queue enables a number of items to wait for the occurrence of an event, or access to a rationed resource, while maintaining the strict order in which they arrived. See also FIFO, STACK. **Microsoft Encyclopedia of Networking (2000)** **queue** A collection of items waiting to be processed in a specific order. Examples of queues in computer and networking technology are numerous and include the following: • A print queue, which consists of print jobs waiting to be sent to a print device • A messaging queue (on a mail server such as Microsoft Exchange Server), which consists of messages waiting to be sent • A backlog of packets waiting to be forwarded over a specific interface by a router • Information, function calls, or transactions sent by one application and forwarded to another by Microsoft Message Queue (MSMQ) Server in Microsoft Windows NT or Message Queuing in Windows 2000 • A collection of fax messages waiting to be processed and sent by a fax server • A series of system messages, such as key presses and mouse clicks, sent by applications to an operating system for processing **McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed. (2002)** **queue** [COMPUT SCI] 1. A list of items waiting for attention in a computer system, generally ordered according to some criteria. 2. A linear list whose elements are inserted and deleted in a first-in-first-out order. [IND ENG] See waiting line. { kyü }
"transport control operation"	'033 Pat. (Claims 8-9)	

Term	Patent (claims)	Extrinsic Evidence[1]
"configure"	'033 Pat. (Claims 1, 4, 7, 12, 15)	
"no longer configured for playback"	'033 Pat. (Claims 1, 12, 15)	
"first mode" "second mode"	'033 Pat. (Claims 1, 7-8, 12, 15)	
"playback responsibility"	'033 Pat. (Claims 1, 11-12, 15-16)	Kyriakakis opinions
"a media particular playback system"	'615 Pat. (Claims 3, 15, 26)	Kyriakakis opinions
"an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-	'033 Pat. (Claims 1, 12, 15)	**Microsoft's Computer Dictionary 5th Edition (2002)** **Instruction** *n.* An action statement in any computer language, most often in machine or assembly language. Most programs consist of two types of statements: declarations and instructions. *See also* declaration, statement. **The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001)** **Instruction** (1) A statement in a programming language. (2) A machine instruction. **Dictionary of Computing, 6th edition (2010)**

Term	Patent (claims)	Extrinsic Evidence[1]
based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;"		**instruction** /ɪnˈstrʌkʃən/ *noun* a word used in a programming language that is understood by the computer as a command to carry out a particular action 'A Taos kernel, typically 15Kb in size, resides at each processing node to 'translate', non-native instructions – on the fly when needed. This kernel contains the only code which has to be written in the processor's native instruction set.' [*Computing*] **instruction** **McGraw-Hill Dictionary of Scientific and Technical Terms (6th Ed.)** **instruction** [COMPUT SCI] A pattern of digits which signifies to a computer that a particular operation is to be performed and which may also indicate the operands (or the locations of operands) to be operated on. { inˈstrək·shən } Kyriakakis opinions